

MATHEMATICS MISSION STATEMENT

Stratton School’s mission is to challenge each student to develop and extend mathematical proficiency and literacy through a focused and coherent curriculum, highest quality mathematics teaching, and assessments that meet the learning needs of each student. Using the Common Core Standards as a foundation, the curriculum will provide an emphasis on depth over breadth with a focus on essential concepts and processes of mathematics. In meeting the demands of a changing world, the mathematics curriculum will prepare students to think critically, problem solve, innovate, communicate, and collaborate.

GOAL STATEMENT: Standards for Mathematical Practice” from Common Core Math Standards. Mathematically proficient students communicate verbally, numerically, symbolically, and graphically through:

- * Making sense of problems and persevering in solving them
- * Reasoning abstractly and quantitatively
- * Constructing viable arguments and critiquing the reasoning of others
- * Modeling with mathematics
- * Using appropriate tools strategically
- * Attending to precision
- * Looking for and making use of structure
- * Looking for and expressing regularity in repeated reasoning

Pre-K-2 STRATTON SCHOOL – Math

CURRICULUM DOCUMENT: Outs of one grade level are the Ins for the next grade level

PreK Grade Outs	K Grade Outs	1 Grade Outs	2 Grade Outs
C.C. Rote counts to 20 and beyond by ones increasing accuracy.	K.CC.A Knows number names and the count sequence.	1.OA.A. Represent & solve problems involving addition & subtraction.	2.OA.A Represent and solve problems involving addition and subtraction.
C.C. Subitizes to determine how many (recognizes small quantities immediately)	K.CC.B Count to tell the numbers of objects.	1.OA.B. Understand & apply properties of operations & the relationship between addition & subtraction.	2.OA.B Add and subtract within 20
O.A. Counts using 1:1	K.CC.C Compare numbers.	1.OA.C. Add & subtract within	2.NBT.A Understand place

correspondence with increasing accuracy		20.	value.
G Describes, sorts and classifies shapes using some attributes such as size, sides, and other properties.	K.OA.A Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.	1.OA.D. Work with addition & subtraction equations.	2.NBT.B Use place value understanding and properties of operations to add and subtract.
G. Demonstrates or describes relative positions of objects, using words such as up, down, beside, over		1.NBT.A Extending the counting sequence	2.MD.A Measure and estimate lengths in standard units.
M.D. Recognizes, duplicates, creates, and extends simple patterns using objects		1.NBT.C Use place value understanding & properties of operations to add & subtract.	
		1.MD.A Measure lengths indirectly & by iterating length units.	
Supporting Clusters			
	K.MD.B Classify objects and count the number of objects in categories.	1.MD.C. Represent and interpret data.	2.OA.C Work with equal groups of objects to gain foundations for multiplication.
	K.G.B Analyze, compare, create, and compose shapes.		2.MD.C Work with time and money.
			2.MD.D Represent and

			interpret data.
Additional Clusters			
	K.MD.A Describe and compare measureable attributes.	1.MD.B Tell and write time.	2.G.A Reason with shapes and attributes.
	K.G.A Identify and describe.	1.G.A. Reason with shapes and their attributes.	
Required Fluencies			
	K.OA.A.5 Add/Subtract within 5	1.OA.C.6 Add/subtract within 10.	2.OA.B.2 Single-digit sums and differences (from memory by end of Grade 2)
			2.NBT.B.5 Add and subtract within 100

3-4 STRATTON SCHOOL – Math

CURRICULUM DOCUMENT: Outs of one grade level are the Ins for the next grade level

3 Grade Outs	4 Grade Out		
3.OA.A Represents and solve problems involving multiplication and division.	4.OA.A Use the four operations with whole numbers to solve problems.		
3.OA.B Understand properties of multiplication and the relationship between multiplication and division.	4.NBT.A Generalize place value understanding for multi-digit whole numbers.		
3.OA.C Multiply and divide	4.NBT.B Use place value		

within 100.	understanding and properties of operations to perform multi-digit arithmetic.		
3.OA.D Solve problems involving the four operations, and identify and explain patterns in arithmetic.	4.NF.A Extend understanding of fraction equivalence and ordering.		
3.NF.A Develop understanding of fractions as numbers.	4.NF.B Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.		
3.MD.A Solve problems involving measurement and estimation of intervals of time, volume, and masses of objects.	4.NF.C Understand decimal notation for fractions, and compare decimal fractions.		
3.MD.C Geometric measurement: understand concepts of area and relate area to multiplication and to addition.			
Supporting Clusters			
3.MD.B Represent and interpret data.	4.OA.B Gain familiarity with factors and multiples.		
3.G.A Reason with shapes and their attributes.	4.MD.A Solve problems involving measurement and conversion of		

	measurements from a larger unit to a smaller unit.		
	4.MD.B Represent and interpret data.		
Additional Clusters			
3.NBT.A Use place value understanding and properties of operations to perform multi-digit arithmetic.	4.MD.C Geometric measurement: understands concepts of angle and measurement angles.		
3.MD.D Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measurements.	4.G.A Draw and identify lines and angles, and classify shapes by properties of their lines and angles.		
Required Fluencies			
3.OA.C.7 Single-digit products and quotients(Products from memory by end of Grade 3).	4.NBT.B.4 Add/subtract within 1,000,000		
3.NBT.A.2 Add/subtract within 1000.			

5-8 STRATTON SCHOOL – Math

CURRICULUM DOCUMENT: Outs of one grade level are the Ins for the next grade level

5 OUTS	6 OUTS	7 OUTS	8 OUTS
5.NBT.A Understand the place value system.	6.RP.A Understand ratio concepts & use ratio reasoning to solve problems.	7.RP.A Analyze proportional relationships and use them to solve real-world and mathematical problems.	8.EE.A Work with radicals and integer exponents.
5. NBT.B Perform operations with multi-digit whole numbers and with decimals to hundredths.	6.NS.A Apply & extend previous understandings of multiplication & division to divide fractions by fractions	7.NS.A Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	8.EE.B Understand the connections between proportional relationships, lines, & linear equations.
5. NF.A Use equivalent fractions as a strategy to add and subtract fractions	6.NS.C Apply & extend previous understandings of numbers to the system of rational numbers.	7.EE.A Use properties of operations to generate equivalent expressions.	8.EE.C Analyze and solve linear equations & pairs of simultaneous linear equations.
5. NF.B Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	6.EE.A Apply & extend previous understandings of arithmetic to algebraic expressions.	7.EE.B Solve real-life and mathematical problems using numerical and algebraic expressions and equations.	8.F.A Define, evaluate, & compare functions.
5.MD.C Geometric measurement: understand concepts of volume and relate volume to multiplication and division.	6.EE.B Reason about & solve one-variable equations and inequalities.		8.F.B Use functions to model relationships between quantities.

	6.EE.C Represent & analyze quantitative relationships between dependent & independent variables.		8.G.A. Understand congruence and similarity using physical models, transparencies, or geometry software.
			8.G.B. Understand and apply the Pythagorean Theorem.
Supporting Standards			
5.MD.A Convert like measurement units with a given measurement system.	6.G.A Solve real-world and mathematical problems involving area, surface area, and volume.	7.SPA Use random sampling to draw inferences about a population.	8.NS.A Know that there are numbers that are not rational, and approximate them by rational numbers.
5.MD.B Represent and interpret data		7.SPC Investigate chance processes and develop, use, and evaluate probability models.	8.SP.A Investigate patterns of association in bivariate data.
Additional Clusters			
5.OA.A Write and interpret numerical expressions.	6.NS.B Compute fluently with multi-digit numbers and find common factors and multiples.	7.G.A Draw, construct, and describe geometrical figures and describe the relationships between them.	8.G.C Solve real-world and mathematical problems involving volume of cylinders, cones & spheres.
5.OA.B analyze patterns and relationships.	6.SP.A Develop understanding of statistical variability.	7.G.B. Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.	
5.G.A Graph points on the coordinate plane to solve real-world and mathematical	6.SP.B Summarize and describe distributions.	7.SP.C Draw informal comparative inferences about two populations.	

problems.			
5.G.A. Classify two-dimensional figures into categories based on their properties.			
Required Fluencies			
5.NBT.B.5 Multi-digit multiplication	6.NS.B.2 Multi-digit division		
	6.NS.B.3 Multi-digit decimal operations		